

IN THE CLAIMS:

1. (Currently amended) An improved tong die, especially suitable for a backup unit in a combined power tong/backup assembly, said backup unit comprising a hook shaped member which receives a tubular, comprising:

a tong die comprising a base portion and a gripping surface portion, said base portion adapted to be received into a backup jaw and fixed in place therein, and wherein said gripping surface portion, in profile view, is non-symmetric about a centerline through and normal to said base portion, and wherein said gripping surface portion comprises a toothed surface which extends over substantially the entirety of said gripping surface portion, and wherein said tubular is forced into said hook shaped member by said backup jaw and tong die, thereby rotationally fixing said tubular member with respect to said backup unit, and wherein the shape of said non-symmetric gripping surface portion comprises a section of the arc of a parabola, whereby said tong die can effectively grip a range of tubular outer diameters both larger and smaller than a range which may be effectively gripped by a symmetric gripping surface portion.

2. (Canceled) The tong die of Claim 1, wherein:

said backup jaw moves around a point of rotation;

said gripping surface portion, in profile view, comprises a segment of the arc of a circle,

and

a center of said circle is displaced from a said centerline ~~through and normal to said base portion~~, in a direction away from said point of rotation of said backup jaw.

3. (Canceled) The tong die of Claim 1, wherein said non-symmetric shape comprises a section of the arc of a parabola.

4. (Canceled) The tong die of Claim 1, wherein said non-symmetric shape comprises a substantially straight line, angled with respect to said centerline.

5. (Currently amended) A tong assembly comprising:

- a) a power tong;
- b) a backup assembly coupled to said power tong;

wherein said backup assembly comprises a hook shaped member for receiving a tubular, and a pair of rotatable jaws, each of said jaws having a tong die mounted therein, said tong die comprising a base portion and a gripping surface portion, said base portion adapted to be received into said jaw and fixed in place therein, and wherein said gripping surface portion, in profile view, is non-symmetric about a centerline through and normal to said base portion, and wherein said gripping surface portion comprises a toothed surface which extends over substantially the entirety of said gripping surface portion, wherein only one of said tong dies contacts said tubular at a given time, and when said one tong die is brought into contact with said tubular by rotation of the rotatable jaw on which said tong die is mounted, said tubular is forced into said hook shaped member and rotationally fixed with respect to said backup assembly, and wherein the shape of said non-symmetric gripping surface portion comprises a section of the arc of a parabola, whereby said tong die can effectively grip a range of tubular outer diameters both larger and smaller than a range which may be effectively gripped by a symmetric gripping surface portion.

6. (Canceled) The tong assembly of Claim 5, wherein:

each of said jaws moves around a point of rotation;
said gripping surface portion, in profile view, comprises a segment of the arc of a circle,
and
a center of said circle is displaced from a said centerline ~~through and normal to said base portion~~, in a direction away from said point of rotation of said backup jaw.

7. (Canceled) The tong assembly of Claim 5, wherein said gripping surface portion, in profile view, comprises a segment of the arc of a parabola.